## Claims

The invention claimed is:

1. A method for backing up a file system comprising the steps of:

generating a list of inodes, in inode number order, that have changed, said list including inode numbers;

generating a table which has names and inode numbers for all files currently in the file system;

sorting said list by inode number;

merging said list and said table by inode number, whereby relevant inodes and file names are provided in a single entity; and

backing up files based on said merged list and table.

2. The method of claim 1 in which said inode number also includes a generation number.

3. The method of claim 1 further including the step of storing said merged list and table in its own file, referred to as a shadow name space file.

4. The method of claim 3 further including the step of accessing said shadow name space file in blocks.

5. The method of claim 4 in which said blocks are partitioned and said backing up is performed by at least two independent processors with each processor backing up files indicated in said partition.

6. The method of claim 5 in which said partitioning is based upon estimated time for completion of file backup for files indicated in said partition.

7. The method of claim 1 in which said backup is carried out in the same order as indicated in said merged list and table.

8. A computer program product, for file system backup, stored on a machine readable medium having program means thereon for (1) generating a list of inodes, in inode number order, that have changed, said list including inode numbers; (2) generating a table which has names and inode numbers for all files currently in the file system; (3) sorting said list by inode number; (4) merging said list and said table by inode number, whereby relevant inodes and file names are provided in a single entity; and (5) backing up files based on said merged list and table.

9. A data processing system comprising:

a central processing unit;

a random access memory for storing data and programs for execution by said central processing unit;

a nonvolatile storage device;

program means, for file system backup, stored within said memory for (1) generating a list of inodes, in inode number order, that have changed, said list including associated inode numbers; (2) generating a table which has names and inode numbers for all files currently in the file system; (3) sorting said list by inode number; (4) merging said list and said table by inode number, whereby relevant inodes and file names are provided in a single entity; and (5) backing up files based on said merged list and table.